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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/603,809	06/26/2003	Yukari Takata	239477US2	2782

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EXAMINER

STIGLIC, RYAN M

ART UNIT PAPER NUMBER

2112

DATE MAILED: 09/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/603,809

Applicant(s)

TAKATA, YUKARI

Examiner

Ryan M. Stiglic

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 28 July 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-4 and 9-15 is/are allowed.
- 6) ☒ Claim(s) 5-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☒ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

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### **DETAILED ACTION**

1. Claims 1-15 are pending and have been examined.
2. Claims 5-8 are rejected.
3. Claims 1-4 and 9-15 are allowed.

### ***Response to Arguments***

4. Applicant's arguments, see page 8, line 11 – page 9, line 2, filed July 28, 2005, with respect to claims 1-4 have been fully considered and are persuasive. The rejection of claims 1-4 has been withdrawn.

5. Applicant's arguments, see page 9, line 14 – page 10, line 4, filed July 28, 2005, with respect to claims 9-12 have been fully considered and are persuasive. The rejection of claims 9-12 has been withdrawn.

6. Applicant's arguments, see page 10, lines 5-17, filed July 28, 2005, with respect to claims 13-15 have been fully considered and are persuasive. The rejection of claims 13-15 has been withdrawn.

7. Applicant's arguments with respect to claims 5-8 have been considered but are moot in view of the new ground(s) of rejection necessitated by the amendment to independent claim 5.

8. In a brief telephonic interview with Michael Monaco on September 21, 2005 the Examiner wished to clear up the dependency of claim 5. In the remarks filed July 28, 2005 applicant indicated claim 5 was amended to be dependent on claim 1 (see page 8, lines 3-4 and page 9, line 3) however upon inspection claim 5 was not amended to reflect such a statement. In

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the telephonic interview Mr. Monaco indicated claim 5 was not dependent from claim 1 and that the Examiner should ignore the cited sections of the Remarks filed July 28, 2005.

***Claim Rejections - 35 USC § 103***

9. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

10. Claims 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Butta' et al. (US 6633939 B2) in view of Gillespie et al. (US005913045A).

For claim 5:

Butta teaches a data processing system having an arbitration circuit (Fig. 3, A) that receives multiple pieces of priority information (Fig. 3, priority 1, priority 2, or priority 3; col. 3, ll. 4-8) outputted respectively from a plurality of bus masters connected through a shared bus, so as to arbitrate bus access requests (col. 3, line 33 – col. 4, line 56), wherein said plurality of bus masters each comprise a priority generating circuit for generating the priority information (The arbiter A of Fig. 3 shows priority information signals transmitted from initiators [col. 3, ll. 4-8], therefore inherently teaching a priority generating circuit for each initiator/master ). Butta however fails to teach dynamically changing the priority of a master device.

Gillespie teaches a system and method for dynamically determining/varying the priority of requests (col. 43, line 61 – col. 44, line 2). Specifically Gillespie teaches that when a request

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“...is not granted the bus during that particular arbitration sequence, it will be promoted to the next highest level of priority (col. 43, line 61- col. 44, line 2).” Fairness is therefore promoted since lower priority requests are elevated to higher priority requests at which point they are guaranteed to be serviced.

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to implement the dynamic priority mechanism of Gillespie into the arbitration circuit of Butta so that the initiators are given the ability to dynamically change the priority of its own requests when it is denied access, therefore promoting fairness by allowing lower priority requests to be promoted through the priority mechanism to the point of being the highest priority devices and being granted the bus in the next opening.

For claim 6

The data processing system according to claim 5, wherein each said priority generating circuit comprises a priority up circuit for, when a bus access request was unaccepted with an outputted piece of priority information (Butta; Fig. 3, priority 1, priority 2, or priority 3; col. 3, ll. 4-8), adding or subtracting a given value to or from said outputted piece of priority information, so as to set a new piece of priority information (Gillespie; col. 43, line 61 – col. 44, line 2; The priority up circuit is implied from “it will be *promoted* to the next highest level of priority”, thus teaching the adding of a given value to said outputted piece of priority information.).

For claim 7:

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The data processing system according to claim 6, wherein each said priority generating circuit further comprises a priority changing quantity setting register for setting said given value. The invention of Gillespie teaches dynamically changing the priority by a constant quantity (col. 43, line 61 – col. 44, line 2). Although not explicitly stated, the Examiner understands a quantity setting register is present in the invention of Gillespie. The priority of the master devices of Gillespie changes by 1 each time a threshold is reached or a timer has expired. It is therefore obvious that a quantity setting register with a stored value of 1 is inherently present in the master devices of Gillespie.

For claim 8:

The data processing system according to claim 6, wherein each said priority generating circuit further comprises a limiting circuit for limiting the priority upping of said priority information (the priority values are *limited* to a low, medium, and high value; Kurth; col. 43, ll. 56-57; Therefore there must be some means of limiting the priority from increasing beyond a “high priority” value).

***Allowable Subject Matter***

11. Claims 1-4 and 9-15 are allowed.

12. The following is a statement of reasons for the indication of allowable subject matter:

As noted in the Office Action dated April 29, 2005 claim 4 would be allowable if rewritten in independent form including all of the limitations of the base claim from which it depends, therefore in light of applicant’s persuasive arguments (see page 8, line 11 – page 9, line

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2) and the amendment to independent claim 1, claims 1-4 are allowable over the prior art of record.

As noted in the Office Action dated April 29, 2005 claim 10 would be allowable if rewritten in independent form including all of the limitations of the base claim from which it depends, therefore in light of applicant's persuasive arguments (see page 9, line 14 – page 10, line 4) and the amendment to independent claim 9, claims 9-12 are allowable over the prior art of record.

As noted in the Office Action dated April 29, 2005 claim 14 would be allowable if rewritten in independent form including all of the limitations of the base claim from which it depends, therefore in light of applicant's persuasive arguments (see page 10, lines 5-17) and the amendment to independent claim 13, claims 13-15 are allowable over the prior art of record.

### *Conclusion*

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The various recited prior art references deal with prioritized arbitration schemes.

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after

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the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ryan M. Stiglic whose telephone number is 571.272.3641. The examiner can normally be reached on Monday - Friday (6:00-3:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rehana Perveen can be reached on 571.272.3676. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RMS



**PAUL R. MYERS  
PRIMARY EXAMINER**